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PATENT APP. SERIAL NO.
09/921,083

SPECIFICATION AMENDMENTS:

Please replace the paragraph beginning at line 21 of page 2 with the following:

The J-lead also experiences stress forces due to thermal expansions acting in an axial direction relative to the lengthwise extent of the rotor shaft. Because the J-lead and the rotor coils are conductors, electrons move at constant average "drift" velocity through the lead and coils experiencing continual collisions with the atoms of the crystalline structures of the lead and coils. These collisions, of course, generate heat and cause thermal expansions of the J-lead 12 and the rotor coils. Because one end of the ~~elongate~~axial portion 14 of the J-lead is fixedly connected to the radial stud, thermal expansion of the J-lead often is axially biased, causing the end opposite to the one connected to the radial stud 32' to move farther away from the radial stud 32'. At the same time, thermal expansion of the rotor coil 28' generates a stress force in the opposite direction acting on that portion 16 of the J-lead that extends outwardly in a radial direction from the rotor shaft 24' and attaches to the coil. As the coil expands, the portion of the J-lead that is attached to the coil is pushed toward the radial stud 32'.

Please replace the paragraph beginning at line 15 of page 9 with the following:

During operation of the power generator, the sectioned conductor 40 and the at least one rotor coil 28 undergo thermal expansions at least in part as a result of the heat generated by the electrical current carried by the sectioned conductor 40 and the at least one rotor coil 28. Because the conductor 40 is connected to the radial stud 32, thermal expansion of the conductor 40 is biased away from the radial stud 32. More specifically, as the conductor undergoes thermal expansion, the end ~~43~~ of the conductor 40 opposite the radial stud 32 moves farther away from the radial stud 32. Conversely, thermal expansion of the at least one rotor coil 28 is biased

toward the radial stud 32 in the sense that the portion of the at least one coil 28 closest to the radial stud 32 moves toward the radial stud 32.

Please replace the paragraph beginning at line 7 of page 14 with the following:

As illustrated perhaps more clearly in FIG. 9, the apparatus 20 preferably comprises a plurality of slips springs 50, 55, 56, 57, 58, 59 secured in notches formed in the surface of the radial portion 43 of the first sectioned member 41. Because the radial portion 43 of the first sectioned member 41 extends at least partially into the conductor channel 46 extending into the second sectioned member 44, the space between the radial portion 43 of the first sectioned member 41 and the surface of the conductor channel 46 can be made sufficiently narrow so as to ensure that at least one of the plurality of the slip springs remains in surface contact with the surface of the conductor channel 46 even as the second sectioned member 44 moves relative to the first sectioned member 42. Thus, as illustrated explicitly in FIGS.5A, 5B, and 9 the electrical connection between the first sectioned member 42 and the second sectioned member 44 is maintained as the latter moves relative to the former while contact between the surface of the conductor channel 46 and at least one of the plurality of slip springs 50, 55, 56, 57, 58, 59 is maintained. Movement can be axial radial, or any combination of movements.

Please replace the paragraph beginning at line 29 of page 14 with the following:

Even greater degrees of freedom of movement are obtained if the conductor channel 46 extends entirely through a portion of the second sectioned member 44 to thereby define a groove formed in the second sectioned member 44. The width of the ~~groove 44~~conductor channel 46 is preferably greater than the corresponding cross sectional width of the radial portion 43 of the

first sectioned member 42. As illustrated perhaps most vividly in FIGS.5A and 5B, this permits the second sectioned member 44 to move even farther axially relative to the lengthwise extent of the rotor shaft 24. The electrical connection between the first sectioned member 42 and the second sectioned member 44 is maintained provided that the surface of the second sectioned member 44 contacts at least a portion of at least one of the plurality of slip springs 50, 55, 56, 57, 58, 59 positioned in notches in the radial portion 43 of the first sectioned member 42. As illustrated in FIGS.5A and 5B, the ~~groove~~conductor channel 46 thus permits the second sectioned member 44 to move almost completely past the radial portion 43 of the first sectioned member 42 and still remain in electrical contact with the first sectioned member 42, thereby increasing the extent to which the second sectioned member 44 can effectively move axially relative to the lengthwise extent of the rotor shaft 24.

Please replace the paragraph beginning at line 22 of page 15 with the following:

The structural integrity of the apparatus 20 can be enhanced by a structural support 70 positioned to connect to the rotor shaft 24 and extending through the ~~groove~~conductor channel 46 in the second sectioned member 44 to connect to the radial portion 43 of the first sectioned member 42 (see FIGS.6 and 8). So positioned, the second sectioned member 44 is free to move axially and radially relative to the rotor shaft 24 while the support structure 70 extends through the ~~groove~~conductor channel 46 to preferably connect fixedly to the radial portion 43 of the first sectioned member 42. The open ~~groove~~conductor channel 46 permits the second sectioned member to move without obstruction from the support structure 70 as it extends into the open groove of the second sectioned member 44 of the sectioned conductor 40. The structural support 70 can connect to the rotor shaft 24 at various points. Preferably, however, because the

sectioned conductor can be positioned within in a slot formed in the rotor shaft 24, the structural support 70 connects to a vertical portion of the slot extending upwardly from the rotor shaft 24.

Please replace the paragraph beginning at line 10 of page 16 with the following:

FIG.10 illustrates a second embodiment of the apparatus 80 having a sectioned conductor 100. As illustrated, the first sectioned member 102 comprises a plurality of radially extending radial portions 103 and a second sectioned member 104 having formed therein a corresponding plurality of conductor channels extending completely through a portion of the surface of the second sectioned member 104 to define a plurality of grooves 106. Moreover, a plurality of strip springs 110, 115, 116, 117, 118, 119 is positioned therein to permit the second sectioned member 104 to move relative to the first sectioned member 102 while remaining electrically connected thereto via the plurality of strip springs 110, 115, 116, 117, 118, 119. At least one support structure can preferably be positioned on the rotor shaft ~~84~~24 so as to extend through at least one of the plurality of grooves 106 and connect to at least one of the distinct radial portions extending therein.

Please replace the paragraph beginning at line 28 of page 16 with the following:

FIG. 11 illustrates yet a third embodiment of the apparatus 140 in which the sectioned conductor 160 includes a third sectioned member 192 along with first and second sectioned members 162, 164. The first sectioned member 162 is positioned to connect to the rotor shaft 144 and preferably includes an axial portion 161 preferably having a plurality of slip springs positioned in notches formed in the surface of the axial portion 161. The first sectioned member 162 further includes a radial portion 163, also preferably having a plurality of slip springs

positioned in notches formed in the surface of the radial portion 163. The second sectioned member 164 is positioned to connect to at least one rotor coil 148 and preferably includes a bore ~~166~~ defining a second sectioned conductor channel 166 extending into the second sectioned member 164 and positioned to at least partially receive therein the radial portion 163 of the first sectioned member 162. As illustrated, the third sectioned member 192 is connected to the radial stud 152 extending into the rotor shaft 144. The third sectioned member 192 preferably includes a third sectioned conductor channel 194 into which the axial portion ~~163~~161 of the first sectioned member 162 extends.

Please replace the paragraph beginning at line 19 of page 17 with the following:

The sectioned conductor 160, so formed, permits the second and third sectioned members 164, 192 of the sectioned conductor to move relative to the first sectioned member 162 in response to stress forces. The first, second, and third sectioned members remain electrically connected through contact maintained between the plurality of slip springs contacting surface portions of the second sectioned conductor channel 166 and the third sectioned conductor channel 194. Accordingly, the sectioned conductor 160 provides a conductive path between the radial stud 152 and the at least one rotor coil 148 and is able to accommodate stress forces while substantially avoiding internal deformation.